



Resume

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Title: Professor

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Education Background:

1994-2001 PhD in Sciences, University of Minho

1991-1993 MSc in Biotechnology (Biochemical Engineering area), Instituto Superior Técnico de Lisboa (IST)

1984-1989 B.S., Applied Plant Biology (Faculty of Sciences, Lisboa)

Working Experiences:

2005-present; Associate Professor with definitive nomination, Dep. Biology, University of Minho, Braga, Portugal

2001-2005; Auxiliary Professor, Dep. Biology, University of Minho, Braga, Portugal

1993-2001; Assistant Professor, Dep. Biology, University of Minho, Braga, Portugal

1991-1993; Fellow, Assistant Dep. Biology, University of Minho, Braga, Portugal

1989-1991; Researcher at Quatrum (Empresa Nacional de Química Orgânica, S.A.)

Research Interests:

Study of secondary metabolism of plants, metabolites and their bioactivities, focusing on antioxidant, anti-inflammatory and neuroprotective properties. Development of products incorporating biofunctional extracts, fractions and compounds in various medicinal plants arrays (nanoparticles, textiles, cosmetics, nutraceuticals)

Abstract

Wound healing and antimicrobial activities of topical formulations containing natural products and their nananoparticles

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Extracts, infusions, or other types of preparations from medicinal plants have been used since ancient times for the treatment of several diseases, in what is commonly designated as "folk medicine". In recent years, science has proven that some plant extracts, fractions or specific compounds may have an important role as drug sources with relevant properties.

In this work, particular emphasis will be given to antimicrobial and healing properties of specific plants/compounds in *in vitro* as well as *in vivo* models. New approaches, including nanotechnology, will be addressed.

Based on specific plants some particular topical formulations were developed, used in “real situations” for skin problems like habronema and dermatophilosis. The synergy of the properties of selected plant constituents, gave very positive results associated with a high degree of skin hydration, contributing to cell regeneration. In all cases, after repeated applications, notorious improvements or complete treatment were observed, without significant side effects.

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